ORDER NO. GAD8607432A3

Service Manual

Radio Cassette

RX-SA70

(Silver) (Red) (Black)

Stereo Radio Cassette Player

Color Variation

X	L XC XF
(Silver) (Black) (Red)	(Black)

This is the Service Manual for the following areas.

- X ···For Asia, Latin America, Middle East and Africa areas.
- L ···For Australia.
- XC ···For Saudi Arabia.
- XF ···For New Zealand.

- Please use this manual together with the service manual for model No. RX-SA70 order No. GAD8605569C1.
- This service manual indicates the main differences between; Original RX-SA70 M and RX-SA70 X L XC XF.

SPECIFICATIONS

General:

Power Requirement:	Battery; 3V (two"AA" size penlight batteries) (Panasonic UM-3 or equivalent)	→ **Battery; (two UM-3"AA" size batteries) (National UM-3 or equivalent)**
Dimensions:	3 5/16"(W)X5"(H)X1 1/2"(D) (8.5cm(W)X12.7cm(H)X3.85cm(D)	→ **85mm(W)X127mm(H)X38.5mm(D)**
Weight:	310g (11 oz) without batteries	**310g without batteries**

Radio Section:

Radio Frequency Range:	AM; 525 ~ 1610kHz RX-SA70 M (Original)	→ **AM; 530 ~ 1605kHz RX-SA70 X L XC XF**

REPLACEMENT PARTS LIST

Notes:

1. The letter in round brackets in the Ref. No. column indicates the shipping destination.
   (X) ... For Asia, Latin America, Middle East and Africa areas. (L) ... For Australia. (XC) ... For Saudi Arabia. (XF) ... For New Zealand.
2. The letter in square brackets in the Ref. No. column indicates the color of the product.
   [K] ... Black Type, [R] ... Red Type, [S] ... Silver Type
3. The letter in the circle after the part name indicates the color of the part.
   Ⓚ ... Black, Ⓡ ... Red, Ⓢ ... Silver

Ref. No.	Description	Part Number		Remarks
		RX-SA70 M (Original)	**RX-SA70 X L XC XF**	
K20	Panel, Operation Ⓚ	RKEK5Z	**RKEK5XA**	
K32 [R] (X)	Screw (Cassette Lid M'tg)	QHQ1362	**QHQ1362K**	
K33 [K]	Rear Cabinet Ass'y Ⓚ	RYFXSA70M	**RYFXSA70X**	
K33 [S] (X)	Rear Cabinet Ass'y Ⓢ	RYFXSA70M7	**RYFXSA70X7**	
K33 [R] (X)	Rear Cabinet Ass'y Ⓡ	RYFXSA70M2	**RYFXSA70X2**	
K35 [K]	Cassette Lid Ass'y Ⓚ	RYQXSA70M	**RYQXSA70X**	
K35 [S] (X)	Cassette Lid Ass'y Ⓢ	RYQXSA70M8	**RYQXSA70X8**	
K35 [R] (X)	Cassette Lid Ass'y Ⓡ	RYQXSA70M2	**RYQXSA70X2**	
A1 (X) (XC)	Headphones	RP9546M	**RPHV110J**	
A1 (L) (XF)	Headphones	RP9546M	**RP9545X**	
A1-1 (X) (XC)	Ear Pad Ⓚ	——	**RWR84622A35**	**Added**
A1-1 (L) (XF)	Ear Pad Ⓚ	——	**RWR84615A29**	**Added**
A3	Operating Instructions	RQXK4043Z	**RQXK4051ZA**	
A4	Cassette Tape	——	**RJN41Z**	**Added**
P1 (X) (XC)	Gift Box	RPKK1042Z	**RPKK1057ZA**	
P1 (L) (XF)	Gift Box	RPKK1042Z	**RPKK1055ZA**	
P5	Pad (Cassette Tape)	——	**QPSK1142**	**Added**

National

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

KTB
H.S X L XC XF

Printed in Japan Ⓗ

ORDER NO. GAD8605569C1
A1

Service Manual

Radio Cassette

Stereo Radio Cassette Player

RX-SA70

Silver
Black
Red

This is the Service Manual for the following areas.

M ···For U.S.A.

C ···For Canada.

•Color Variation

M	C
(Silver) (Black) (Red)	(Silver) (Black)

RQ-J16 MECHANISM SERIES

■ SPECIFICATIONS

General:

Power Requirement:	Battery; 3V (two "AA" size Penlight batteries) (Panasonic UM-3 or equivalent)
Power Output:	25mW+25mW...RMS max.
Input:	DC IN; 3V
Output:	Headphones; 32Ω, 3.5φ
Dimensions:	$3^{5}/_{16}$"(W)×5"(H)×$1^{1}/_{2}$"(D) (8.5cm (W)×12.7cm (H)×3.85cm (D)
Weight:	310g (11 oz) without batteries

Radio Section:

Radio Frequency Range:	FM; 88~108MHz AM; 525~1610kHz
Intermediate Frequency:	FM; 10.7MHz AM; 455kHz
Sensitivity:	FM; 2.5μV/0.5mW (−3dB Limit, Sens) AM; 224μV/m/0.5mW output

Tape Deck Section:

Frequency Response:	80~10,000Hz
Tape Speed:	4.8cm/s ($1^{7}/_{8}$ ips)
Track System:	4-track 2-channel stereo playback

Weights and dimensions shown are approximate.
(Les poids et dimensions mentionnes sont approximatifs.)
Design and specifications are subject to change without notice.

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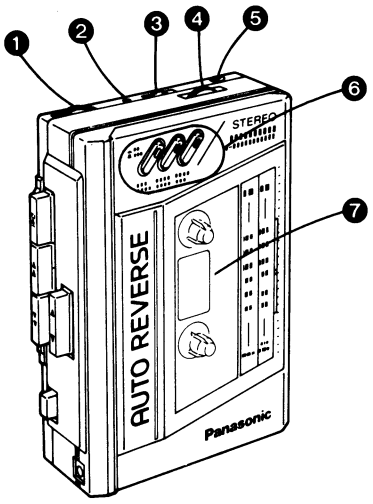
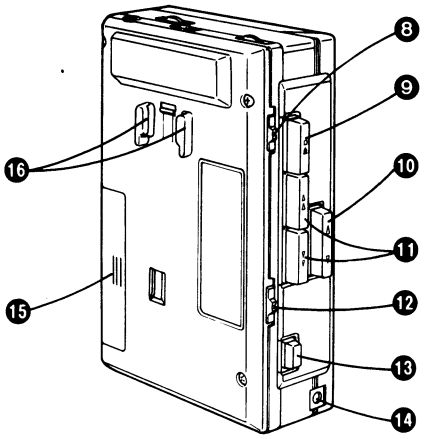
LOCATION OF CONTROLS





❶ Volume Control (VOLUME)
❷ FM Stereo Indicator (FM STEREO)
❸ Band Selector (BAND)
❹ Tuning Control (TUNING)
❺ Headphones Jack (🎧) φ3.5, 32Ω
❻ Combination Equalizer Switches
❼ Cassette Compartment
❽ FM Sensitivity Selector (FM SENS)
❾ Stop/Eject Button (■/⏏ STOP/EJECT)
❿ Playback Button (⏷ PLAY)
⓫ Fast Buttons (⏶ • ⏷ FAST)
⓬ Function Selector (SELECTOR)
⓭ Direction Button (DIRECTION)
⓮ DC Input Jack (DC IN 3 V ⊖-⊙-⊕)
⓯ Battery Compartment
⓰ Clip Receptacle

BATTERY SERVICE LIFE

UM-3 (AA-size) Batteries
Approx. 2.2 hours of playback (EIAJ) with volume set at 3/4 position

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and enviromental conditions, use these values as reference.

DISASSEMBLY INSTRUCTIONS

■ Remove the Rear Cabinet

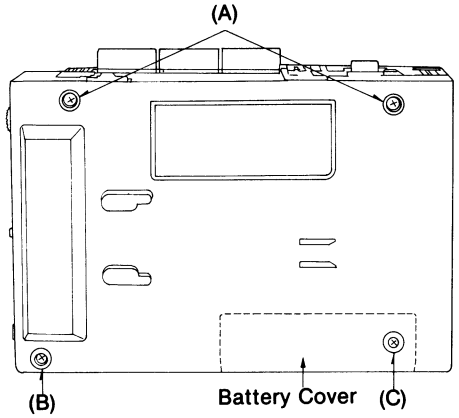


Fig. 1

1. Remove the Battery cover. (Fig. 1)
2. Remove the screws (A) (2.6×30)mm×2. (Fig. 1)
3. Remove the screw (B) (2×24)mm×1. (Fig. 1)
4. Remove the screw (C) (2×6)mm×1. (Fig. 1)

■ Remove the Mechanism & Circuit Board

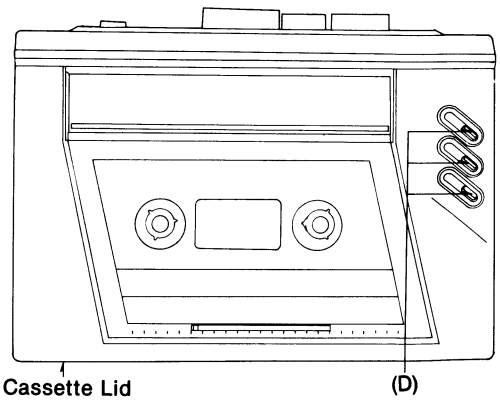


Fig. 2

When remove the button of push switch, be carefull to set the switch in off position.

1. Open the Cassette Lid. (Fig. 2)
2. Remove the Equalizer Buttons (D)×3. (Fig. 2)
3. Remove the Operation Panel (E)×1. (Fig. 3)
4. Remove the Screw (F) (2×6)mm×1. (Fig. 3)

D

■ Remove the Mechanism

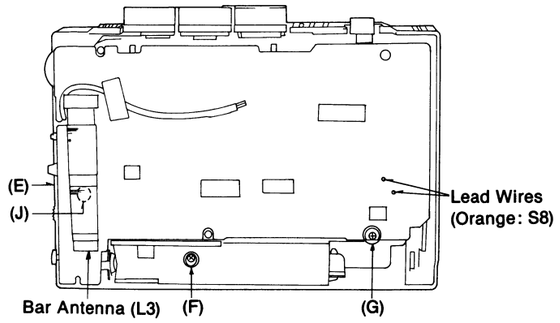


Fig. 3

1. Disconnect the soldered connections of the lead wires. (Fig. 3)
2. Remove the screw (G) (1.7×3)mm×1. (Fig. 3)

■ Remove the Dial Chassis

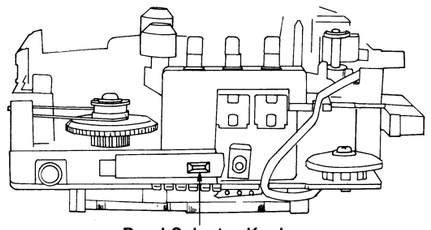


Fig. 5

1. Remove the Band Selector Knob. (Fig. 5)
2. Remove the Bar Antenna (L3). (Fig. 3) (Adjust the AM RF after removing.)
3. Remove the screw (J) (2×6)mm×1. (Fig. 3)

■ Dial Setting Point

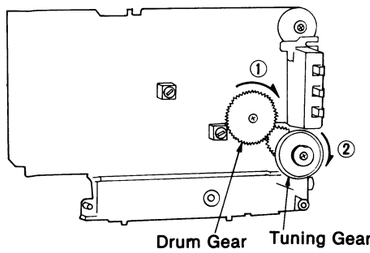


Fig. 7

1. Turn the Drum Gear & Tuning Knob fully in the direction of the arrow ①, ②. (Fig. 7)
2. Re-fix the Chassis of the Dial.

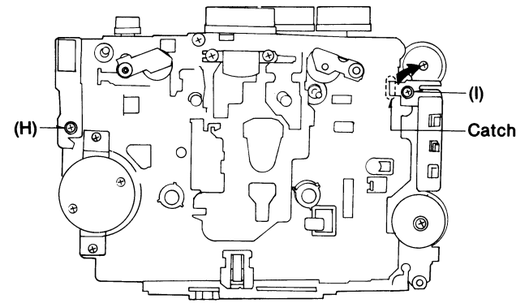


Fig. 4

3. Remove the screw (H) (2×6)mm×1. (Fig. 4)
4. Remove the screw (I) (2×4)mm×1. (Fig. 4)
5. Remove the catch in the direction of arrow. (Fig. 4)

■ Remove the Cassette Lid

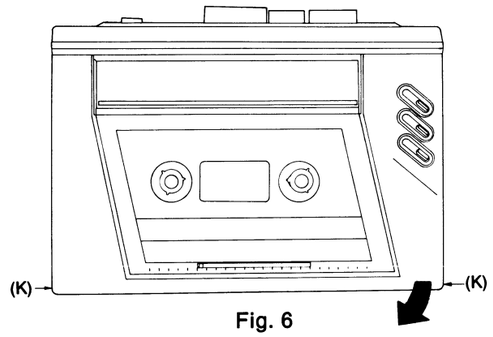
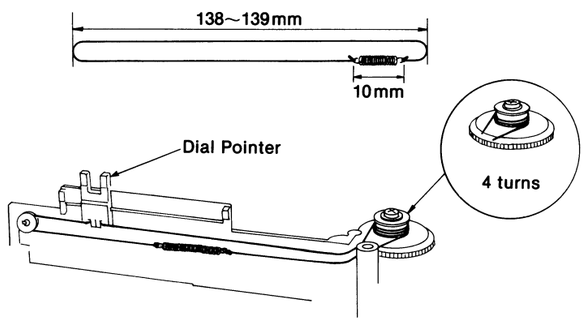


Fig. 6

1. Remove the screws (K)×2.
2. Remove the Cassette Lid in the direction of arrow, and disconnect the inside catch.

∗ When install the Cassette Lid, be sure the Dial Pointer are inserted firmly in the Dial Pointer Holder.

DIAL THREADING



MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set Equalizer switch to OFF.
3. Set band switch to AM or FM ST.
4. Set selector switch to radio.
5. Set power source voltage to 3V DC.
6. FM Sens switch to DX.
7. Output of signal generator should be no higher than necessary to obtain an output reading.

■ AM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		AM-IF ALIGNMENT					
(1)	AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Output meter across voice coil.	T2 (AM IFT)	Adjust for maximum output.
		AM-RF ALIGNMENT					
(2)	AM	〃	511kHz	Tuning capacitor fully closed.	〃	L4 (AM OSC Coil)	Adjust for maximum output.
(3)	AM	〃	1,670kHz	Tuning capacitor fully open.	〃	CT4 (AM OSC Trimmer)	〃
(4)	AM	〃	550kHz	Tune to signal.	〃	(∗1) L3 (AM ANT Coil)	Adjust for maximum output. Adjust L3 by moving coil bobbin along ferrite core.
(5)	AM	〃	1,500kHz	〃	〃	CT3 (AM ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).

(∗1) Cement antenna bobbin with wax after completing alignment.

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		FM-IF ALIGNMENT					
(1)	FM	High side thru. 0.001μF to test point ▼3. Negative side to test point ▼2.	10.7MHz (SWP.)	Point of non-interference. (on/about 90MHz)	Connect vert. amp. of scope to test point ▼5. Negative side to test point ▼7.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 2.)
(2)	FM	〃	〃	〃	〃	T3 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 3.)
		FM-RF ALIGNMENT					
(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2.	86.2MHz	Variable capacitor fully closed.	Output meter across voice coil.	L1 (FM OSC Coil)	(∗2) Adjust for maximum output.
(4)	FM		109.2MHz	Variable capacitor fully open.	〃	CT1 (FM OSC Trimmer)	〃
(5)	FM		90MHz	Tune to signal.	〃	L2 (FM ANT Coil)	〃
(6)	FM		106MHz	〃	〃	CT2 (FM ANT Trimmer)	(∗2) Adjust for maximum output. Repeat steps (3)~(6).

(∗2) Three output responses will be present; proper tuning is the center frequency.

■ SEPARATION ALIGNMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Adjustment of pilot signal.	98MHz, 60dB (CW) Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2.	▼8...(+) ▼7...(−)	VR1	19kHz	Adjust VR1, for 19kHz (±100Hz) reading on electronics counter.

▼ Be sure to fold at the (▼) mark so that mark is on the outside.

D

SCHEMATIC DIAGRAM

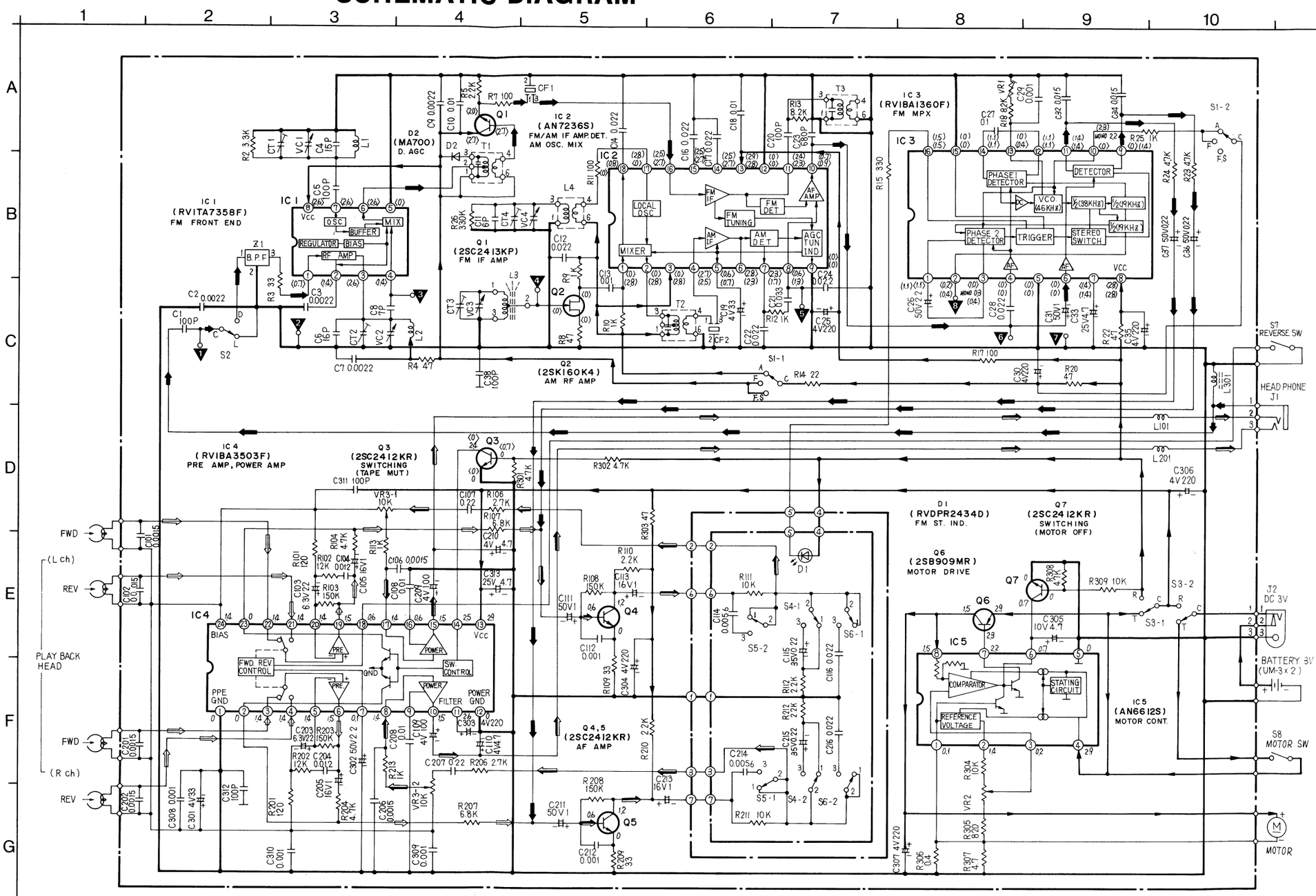
Notes:

1. S1-1, 1-2: Band Selector Switch in "AM" Position. (A...AM, F...FM, F.S...FM ST)
2. S2: Sens Switch in "LOCAL" Position. (D...D.X, L...Local)
3. S3-1, 3-2: Function Switch in "TAPE" Position. (T...Tape, R...Radio)
4. S4-1, 4-2: Low Boost Switch in "OFF" Position. (1...OFF, 3...ON)
5. S5-1, 5-2: High Boost Switch in "OFF" Position. (1...OFF, 3...ON)
6. S6-1, 6-2: High Cut Switch in "OFF" Position. (1...OFF, 3...ON)
7. S7: Reverse Switch in "FWD" Position.
8. S8: Play Switch in "OFF" Position.
9. VR1: FM VCO adjustment VR.
10. VR2: Motor control VR.
11. VR3: Volume control VR.
12. Batter/Current: No Signal.....50mA
    Maximum Out Put
    Tape 180mA
13. Described is schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes.
    One type number is used for supply parts number and production parts number which they are identical.
    e.g. Q1
    2SC2412NRTB, LNSTB —— Production parts number
    [2SC2412] ———— Supply parts number
14. The mark (▼) shows test point.e.g.▼= test point 1.
15. **The supply parts number is described alone in the replacement parts list.**

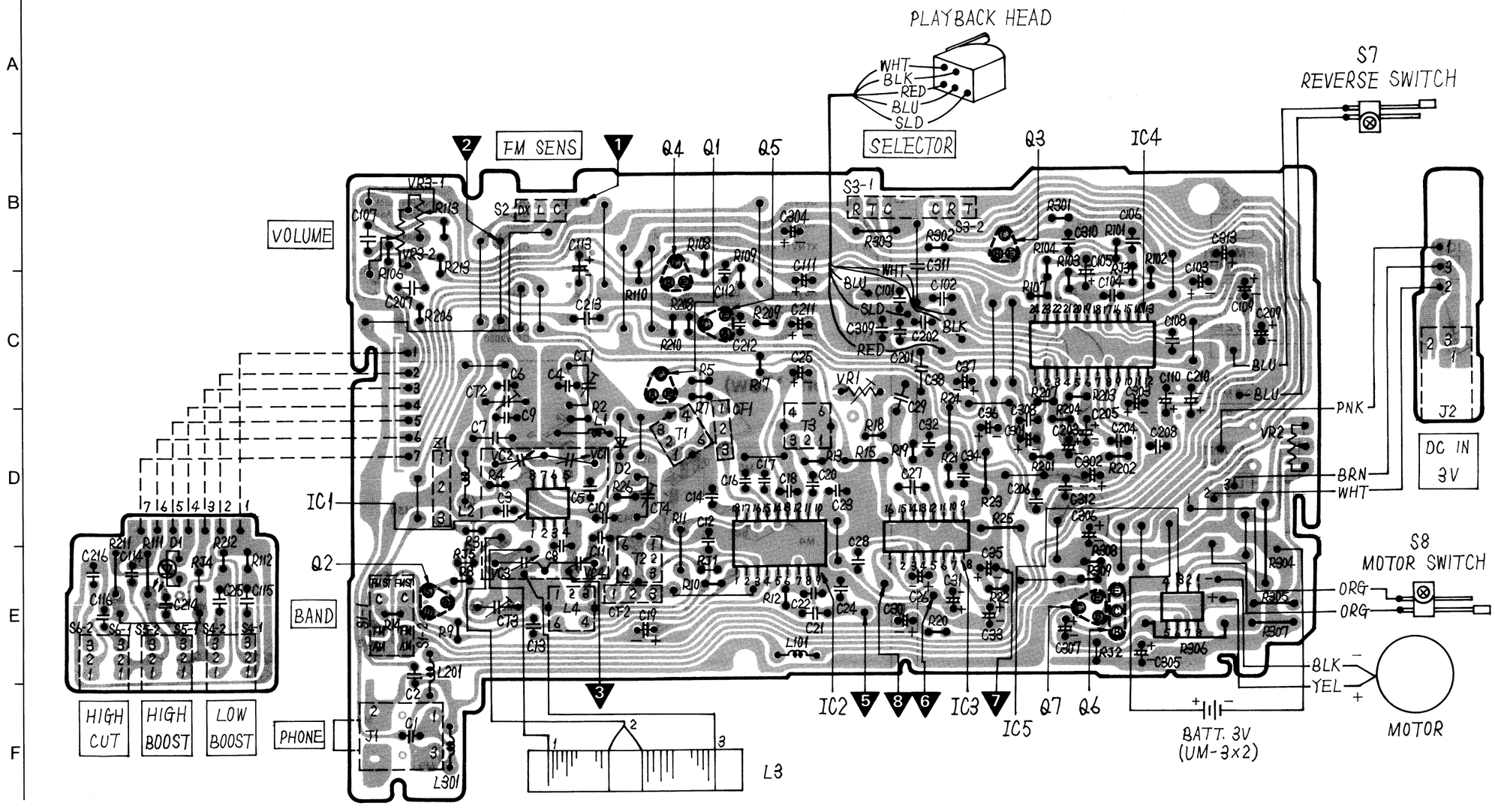
    ➡ Radio (FM) Signal Line
    ⇨ Tape Signal Line
    ➡ Main (Tape & Radio) Signal Line
    ➡ ⊕B Line

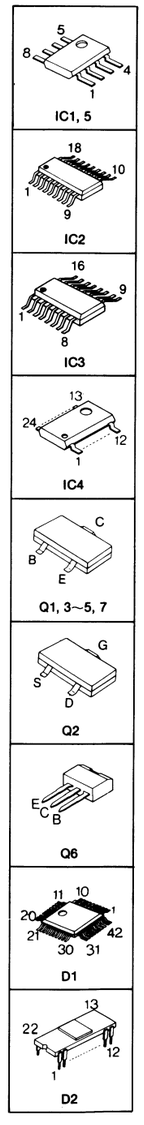
- **This schematic diagram may be modified at any time with the development of new technology.**

16. DC voltage measurement are taken with electronics voltmeter from negative terminal of battery
    〈 〉...FM position, ( )...AM position,
    No mark...Playback position.


IC 1 (RVITA7358F) FM FRONT END
IC 2 (AN7236S) FM/AM IF AMP.DET. AM OSC. MIX
IC 3 (RVIBA1360F) FM MPX
IC 4 (RVIBA3503F) PRE AMP, POWER AMP
IC 5 (AN6612S) MOTOR CONT.
D1 (RVDPR2434D) FM ST. IND.
D2 (MA700) D. AGC
Q1 (2SC2413KP) FM IF AMP
Q2 (2SK160K4) AM RF AMP
Q3 (2SC2412KR) SWITCHING (TAPE MUT)
Q4,5 (2SC2412KR) AF AMP
Q6 (2SB909MR) MOTOR DRIVE
Q7 (2SC2412KR) SWITCHING (MOTOR OFF)
PLAY BACK HEAD
(L ch)
(R ch)
FWD
REV
BATTERY 3V (UM-3 x 2)
MOTOR
HEAD PHONE J1

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM





REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description
		INTEGRATED CIRCUITS
IC 1	**RViTA7358F**	IC (FM Front End)
IC 2	**AN7236S**	IC (FM/AM IF AMP, DET AM OSC, MIX.)
IC 3	**RViBA1360F**	IC (FM MPX)
IC 4	**RViBA3503F**	IC (PRE AMP, Power AMP)
IC 5	**AN6612S**	IC (MOTOR CONT)
		TRANSISTORS
Q 1	**2SC2413KP**	Transistor (FM IF AMP)
Q 2	**2SK160K4**	Transistor (AM RF AMP)
Q 3, 4, 5, 7	**2SC2412KR**	Transistor (SWITCHING (TAPE MUT), AF AMP)
Q 6	**2SB909MR**	Transistor (MOTOR DRIVE)

Ref. No.	Part No.	Part Name & Description
		DIODES & RECTIFIERS
D 1	**RVDPR2434D**	LED (FM ST IND.)
D 2	**MA700**	Diode (D. AGC)
		COILS
L 1, 2	**RL04Y78**	OSC. ANT Coil, FM
L 3	**RLF2N8**	Antenna Coil, AM
L 4	**RL02A3**	Oscillator Coil, AM
L 101, 201, 301	**RLQZP1R0M**	Choke Coil
		TRANSFORMERS
T 1, 3	**RLi4A4**	IFT, FM 1st, 2nd
T 2	**RLi2A37**	IFT, AM

Ref. No.	Part No.	Part Name & Description
		VARIABLE CAPACITORS
VC 1, 2, 3, 4	**RCV4LC3R2Q**	Variable Capacitor
		TRIMMER CONDENSERS
CT 1, 2, 3, 4	**RCV10AF1**	Trimme Capacitor
		VARIABLE RESISTORS
VR 1	**EVNA6AA00B14**	VCO Adjustment VR 10kΩ, (B)
VR 2	**EVNB1AA00B32**	Motor Control VR 300Ω, (B)
VR 3	**EVUBAAT50A14**	Volume Control VR 10kΩ, (A)
		CERAMIC FILTERS
CF 1	**RVFSFE107MAZ**	Ceramic Filter (10.7MHz)

Ref. No.	Part No.	Part Name & Description
CF 2	**RVFPFA455A**	Ceramic Filter (455kHz)
		FILTER
Z 1	**EXCFF76108LM**	Component Combination
		SWITCHES
S 1	**RSS3B32Z**	Switch, Band
S 2	**RSS2A38Z**	Switch, Sensitivity
S 3	**RSS2B38Z**	Switch, Function
S 4, 5, 6	**RSHX065Y**	Switch, Preset Equalizer
S 7	**RSH1A54Z**	Leaf Switch, Reverse
S 8	**RSH1A53Z**	Leaf Switch, Motor
		JACKS
J 1	**RJJD3S5Z**	Jack, Headphones
J 2	**RJJ1B3Z**	Jack, DC IN

: Chip Resistor
: Chip Jamper

■ ALIGNMENT INSTRUCTION

ITEM	INPUT	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
(A) Azimuth	QZZCFM (8kHz, −20dB)	Headphones jack (32Ω)	Azimuth adjustment screw (Refer to Fig. 1)	Adjust the azimuth adjustment screw during repeated forward and reverse playback to obtain the maximum head azimuth alignment with both channels equal. Then screw-lock the adjustment in place.
(B) Tape speed	QZZCWAT (3kHz, −10dB)	〃	VR2 (Refer to Fig. 1)	Playback the central part of the tape and adjust VR2 so that the tape speed is as follows. 3000±90Hz (Forward & Reverse)

* Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

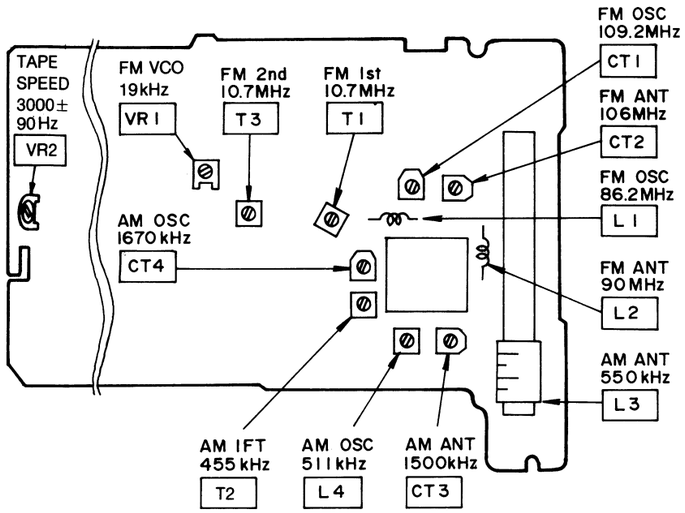


Fig. 1

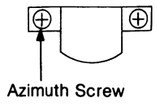


Fig. 1

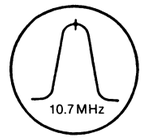
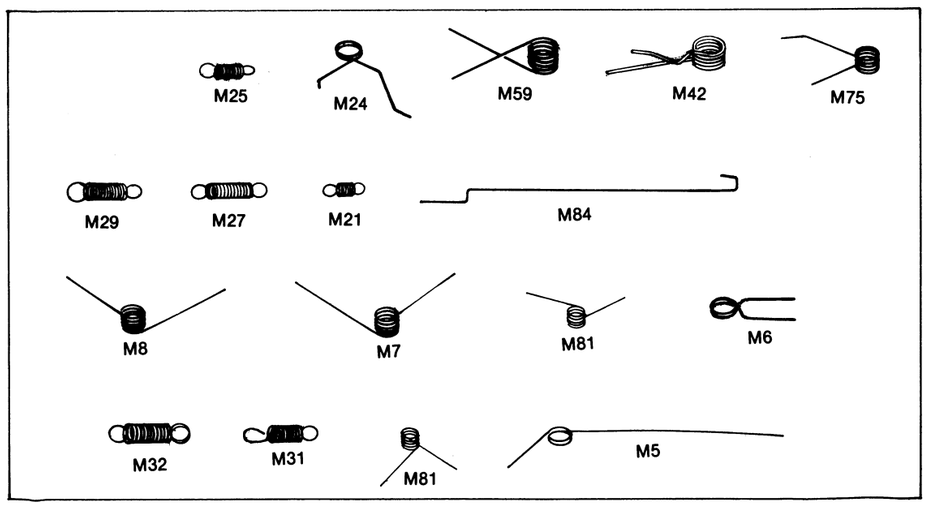


Fig. 2

Fig. 3

■ SPRING ILLUSTRATION

The spring illustration used shows the actual size so it can be used to check the shape of the spring. (The illustration shows the spring separated from the mechanism.)

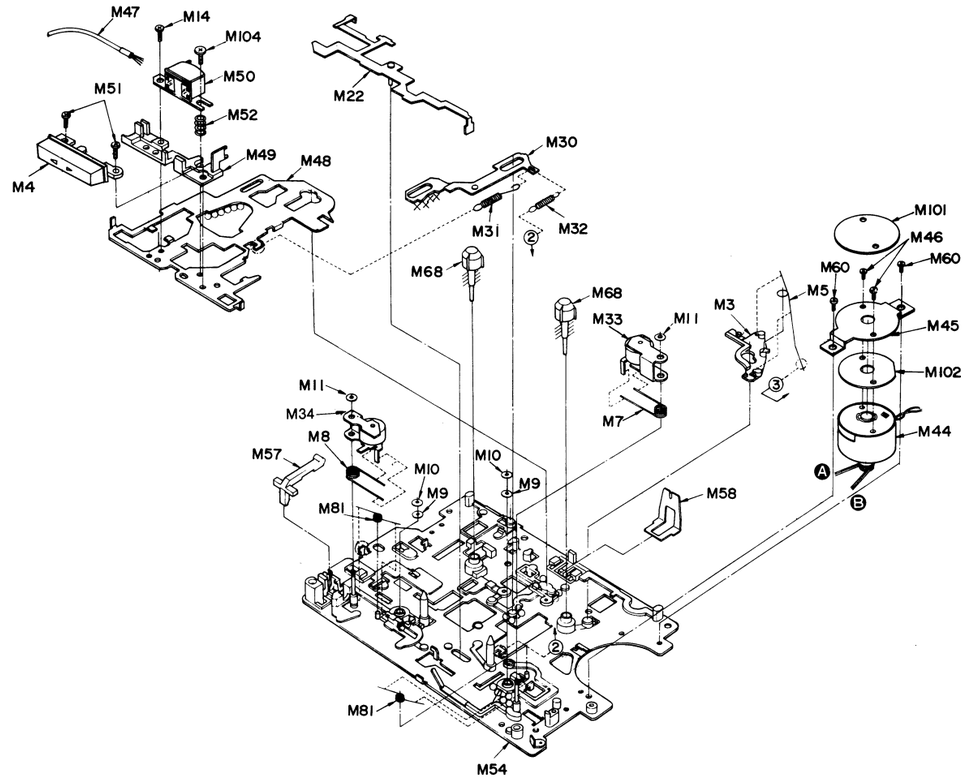


MECHANISM PARTS LOCATION

REPLACEMENT PARTS LIST

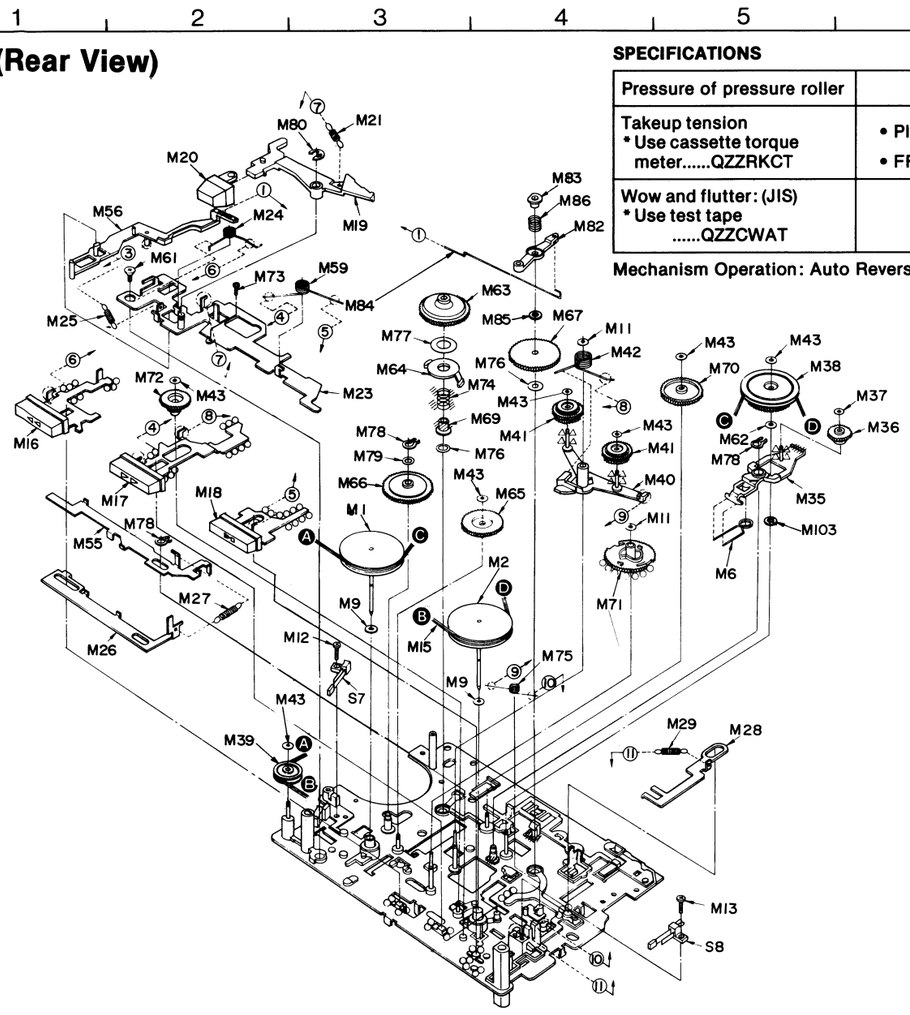
Ref. No.	Part No.	Part Name & Description
	MECHANICAL PARTS	
M 1	**1DWAKSA70Z**	Flywheel Ass'y (FWD)
M 2	**2DWAKSA70Z**	Flywheel Ass'y (REV)
M 3	**QMR2233**	Rod, Auto Stop
M 4	**QG0K1009**	Button, Playback (S)
M 5	**QBN2120**	Spring, Auto Stop
M 6	**QBN2121**	Spring, Auto Reverse
M 7	**QBN2122**	Spring, Pinch Roller (FWD)
M 8	**QBN2123**	Spring, Pinch Roller (REV)
M 9	**RNWK212Z**	Washer, Flywheel
M 10	**QBW2140**	Washer, Flywheel
M 11	**QBW2008**	Washer (Pinch Roller etc. M'tg)
M 12	**XQN17+C6**	Screw ⊕1.7×6 (Reverse Switch M'tg)
M 13	**XTNV17+6Z**	Screw ⊕1.7×6 (Motor Switch M'tg)
M 14	**XQN2+4.5**	Screw ⊕2×4.5 (Playback Head M'tg)
M 15	**RDVK10Z**	Belt, Flywheel
M 16	**QXRK1029**	Rod Ass'y, Rew
M 17	**QXRK1030**	REW Rod Ass'y
M 18	**QXRK1031**	Stop/Eject Rod Ass'y
M 19	**QML4244**	Lever, Direction
M 20	**RBCK76Z**	Button, Direction
M 21	**QBT2090**	Spring, Direction Lever
M 22	**QXRK1026**	Rod Ass'y, Reverse
M 23	**QXHK1000**	Rod, Pressure Plate Ass'y
M 24	**QBN2126**	Spring, FF Rod
M 25	**QBT2089**	Spring, Auto Stop Detect Lever
M 26	**QMR2230**	Rod (A), Lock
M 27	**QBT2088**	Spring, Lock Rod
M 28	**QML4240**	Lever, Change
M 29	**QBT2091**	Spring, Cassette Up
M 30	**QMR2224**	Rod, Playback
M 31	**RUDK1Z**	Spring, Head Base Plate
M 32	**QBT2096**	Spring, Playback Rod
M 33	**QXLK1005**	Pinch Roller Ass'y (FWD)
M 34	**QXLK1006**	Pinch Roller Ass'y (REV)
M 35	**QXLK1007**	Frame Ass'y
M 36	**QDG1398**	Gear, Playback
M 37	**QBW2030**	Washer Playback Gear
M 38	**QXPK1000**	Playback Pulley Ass'y
M 39	**QDP1948**	Pulley (B), Middle
M 40	**QXLK1009**	FF/REW Frame Ass'y
M 41	**QXGK1000**	FF Gear Ass'y
M 42	**QBN2124**	Spring, FF Frame Ass'y
M 43	**QBW2030**	Washer (FF Gear Ass'y etc. M'tg)
M 44	**MHDN4A3LG**	Motor Ass'y
M 45	**RULK10Z**	Angle, Motor Ass'y
M 46	**XQN17+A2FZ**	Screw ⊕1.7×2 (Motor Ass'y M'tg)
M 48	**QMK2199**	Head Base Plate
M 49	**QMZ1327**	Spacer, Playback Head
M 50	**RJH4C13YZ**	Playback Head
M 51	**XSB2D5**	Screw ⊕2×5 (Head Adjustment, Playback Button M'tg)
M 51	**XSB2+N4**	Screw ⊕2×4 (Playback Button M'tg)
M 52	**QBC8027**	Spring, Head Adjustment
M 54	**1UAAKSA70Z**	Mechanism Chassis Ass'y
M 55	**QMR2231**	Rod (B), Lock
M 56	**QML4243**	Lever, Auto Stop Detect
M 57	**QML4242**	Lever, Eject
M 58	**QBP2041**	Spring, Cassette Pressure
M 59	**QBN2127**	Spring, REW Rod
M 60	**XQN16+C2**	Screw ⊕1.6×2 (Motor Angle M'tg)
M 61	**XSS2+4**	Screw ⊕2×4 (Rod Pressure Plate M'tg)

(Front View)



| | | |

(Rear View)



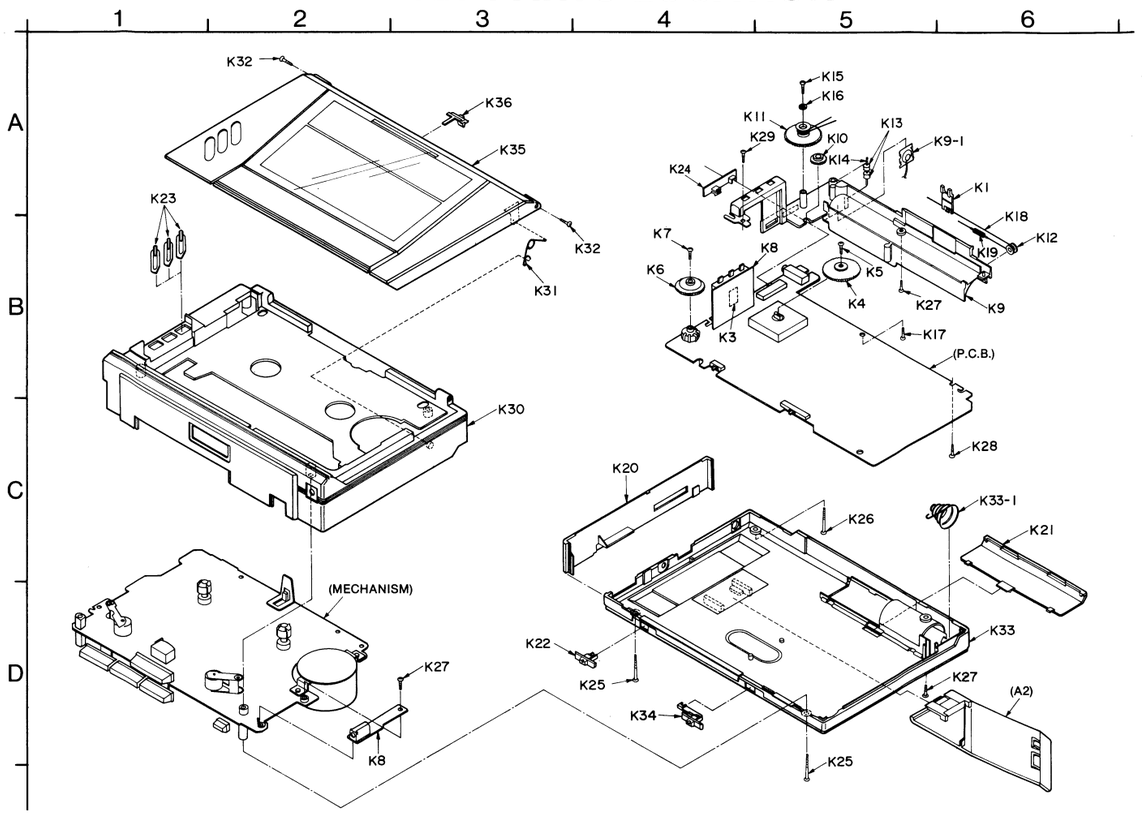
SPECIFICATIONS

Pressure of pressure roller	180±30g
Takeup tension * Use cassette torque meter.....QZZRKCT	• Play: 30^{+10}_{-5}g-cm • FF/REW: 70±20g-cm
Wow and flutter: (JIS) * Use test tape .....QZZCWAT	Less than 0.5% (WRMS)

Mechanism Operation: Auto Reverse

| | | |

CABINET PARTS LOCATION



NOTES:

1. The letter in square brackets in the Ref. No. column indicates the color of the product.
   [K]...Black Type, [R]...Red Type, [S]...Silver Type
2. The letter in the circle after the part name indicates the color of the part.
   Ⓚ...Black, Ⓡ...Red, Ⓦ...White, Ⓢ...Silver, Ⓗ...Gray
3. (M)...For U.S.A.
   (C)...For Canada.

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description
		CABINET PARTS
K 1	**RDPK512Z**	Holder, Dial Pointer Ⓦ
K 2	**RHGK601Z**	Cushion
K 3	**RMPK6Z**	Holder, LED
K 4	**RDGK5606Z**	Gear, Drum
K 5	**XQN17+C3**	Screw ⊕1.7×3 (Drum Gear M'tg)
K 6	**RBNK6Z**	Knob, Volume Ⓚ
K 7	**XQN17+C4**	Screw ⊕1.7×4 (Volume Knob M'tg)
K 8	**RUPK64Z**	Circuit Board
K 9	**RZAXSA70M**	Dial Chassis Ass'y
K 9-1	**RJCK30001Y**	Terminal, Battery +
K 10	**RDGK5607Z**	Gear, Middle
K 11	**RBTK5Z**	Knob, Tuning Ⓚ
K 12	**RDR32Z**	Roller (A), Dial
K 13	**QDP1896**	Roller (B), Dial
K 14	**QMN2672**	Saft, Roller
K 15	**XTN2+6B**	Screw ⊕2×6 (Tuning Knob, Circuit Boar M'tg)
K 16	**XWG2**	Washer (Tuning Knob, Circuit Board M'tg)
K 17	**XTN2+5B**	Screw ⊕2×5 (Circuit Board M'tg)
K 18	**RUDK9Z**	Cord, Dial –
K 19	**RDZ03Y**	Spring, Dial Cord
K 20	**RKEK5Z**	Panel, Operation Ⓚ
K 21 [R]	**RKKK9Z2**	Cover, Battery Ⓡ
K 21 [S]	**RKKK9Z7**	Cover, Battery Ⓢ
K 21 [K]	**RKKK9Z**	Cover, Battery Ⓚ
K 22	**RBDK20Z**	Knob, FM Sens Ⓚ
K 23	**RBEK4Z**	Button, Preset Equalizer Ⓢ
K 24	**RBDK19Z**	Knob, Band Ⓚ
K 25 [R] [S]	**XTN26+30GY**	Screw ⊕2.6×30 (Rear Cabinet M'tg)
K 25 [K]	**XTN26+30GZ**	Screw ⊕2.6×30 (Rear Cabinet M'tg)

Ref. No.	Part No.	Part Name & Description
K 26 [R] [S]	**XTN2+24JY**	Screw ⊕2×24 (Rear Cabinet M'tg)
K 26 [K]	**XTN2+24JZ**	Screw ⊕2×24 (Rear Cabinet M'tg)
K 27	**XTN2+6B**	Screw ⊕2×6 (Rear Cabinet, DC Circuit Board etc. M'tg)
K 28	**XNQC17+C3**	Screw ⊕1.7×3 (Mechanism M'tg)
K 29	**XSN2+4**	Screw ⊕2×4 (Dial Chassis M'tg)
K 30 [K]	**RYMXSA70M**	Front Cabinet Ass'y
K 31	**RUWK28Z**	Spring (Eject)
K 32 [R] [S]	**QHQ1362**	Screw (Cassette Lid M'tg)
K 32 [K]	**QHQ1362K**	Screw (Cassette Lid M'tg)
K 33 [R]	**RYFXSA70M2**	Rear Cabinet Ass'y Ⓡ
K 33 [S]	**RYFXSA70M7**	Rear Cabinet M'tg Ⓗ
K 33 [K]	**RYFXSA70M**	Rear Cabinet Ass'y Ⓚ
K 33-1	**RJCK70001Z**	Spring (Battery –)
K 34	**RBDK21Z**	Knob, Function Ⓚ
K 35 [R]	**RYQXSA70M2**	Cassette Lid Ass'y Ⓡ
K 35 [S]	**RYQXSA70M8**	Cassette Lid Ass'y Ⓢ
K 35 [K]	**RYQXSA70M**	Cassette Lid Ass'y Ⓚ
K 36	**RDPK511Z**	Dial Pointer Ⓦ
		ACCESSORIES
A 1	**RP9546M**	Headphone
A 2 [R] [K]	**RKE447Z4**	Belt Holder Ⓚ
A 2 [S]	**RKE447Z2**	Belt Holder Ⓗ
A 3 (M)	**RQXK4043Z**	Operating Instructions
A 3 (C)	**RQXK4049Z**	Operating Instructions
		PACKINGS
P 1	**RPKK1042Z**	Gift Box
P 2	**RPNK3020Z**	Pad
P 3	**RPEK116Z**	Sheet
P 4	**XZB20X20A04**	Polyethylene Cover

CAPACITORS AND RESISTORS

ELECTRICAL PARTS LIST

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)
ERX	2	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Resistor Type	Wattage Tolerance
ERD: Carbon	10 : 1/8 W J : ±5%
ERG: Metal Film	12 : 1/2 W
ERX: Metal Film	25 : 1/4 W
ERQ: Fuse Type Metal	1 : 1 W
RRD: Carbon (Chip Type)	18 : 1/8 W

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value (1000 pF)	Tolerance	Peculiarity
ECEA	50	M	R47	
Type	Voltage	Peculiarity	Value (0.47 µF)	

Capacitor Type	Voltage: ECEA Type	Voltage: Other	Tolerance
ECEA: Electrolytic	0J : 6.3 V	2H : 500 V DC	C : ±0.25 pF
ECCD: Ceramic	1A : 10 V	1 : 100 V	J : ±5%
ECKD: Ceramic	1C : 16 V	DKC : 400 V AC	K : ±10%
ECQM: Polyester	1E : 25 V		Z : +80%, −20%
	1H : 50 V		
ECQP: Polypropylene	1V : 35 V		P : +100%, −0%
	50 : 50 V		
ECET: Electrolytic			
ECEA□□□N: Non Polar Electrolytic	25 : 25 V		
	16 : 16 V		
QCU □: Ceramic (Chip Type)			
ECUX: Ceramic (Chip Type)			

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
	CAPACITORS	C 27	**ECUX1E104KB**		**RESISTORS**	R 104, 204, 301, 302, 308	**ERJ6GCJ472**
C 1, 5, 20, 312	**RCUX1H101J**	C 29	**RCQP2A102JA**	R 2	**ERJ6GCJ332**	R 106, 206	**ERJ6GCJ272**
C 2, 3, 9	**RCUX1H222KB**	C 31, 111, 211	**ECEA1HKS010**	R 3, 109, 209	**ERJ6GCJ330**	R 107, 207	**ERJ6GCJ682**
C 4	**RCUX1H150JC**	C 32, 34	**RCUX1H153KB**	R 4, 8, 20, 22	**ERJ6GCJ470**	R 111, 211	**ERD16TJ103**
C 6	**RCUX1H160JC**	C 33	**ECEA1EKS4R7**	R 5, 110, 112, 210, 212	**ERJ6GCJ222**	R 303	**ERD16TJ470**
C 7	**RCBS1C222MX**	C 36, 37	**ECEA1HKSR22**	R 7, 17	**ERJ6GCJ101**	R 304	**ERSB10J103**
C 8	**RCUX1H070DC**	C 38	**RCBS1H101KB**	R 9, 10, 12, 113, 213	**ERJ6GCJ102**	R 305	**ERD16TJ821**
C 10, 13, 18, 108, 208	**RCUX1H103KB**	C 101, 102, 106, 201, 202, 206	**RCUX1H152KB**	R 11	**ERD16TJ101**	R 306	**ERSB39JR40**
C 11	**RCUX1H060DC**	C 103, 203	**ECEA0JKS220**	R 13, 18	**ERJ6GCJ822**	R 307	**ERD16TJ4R7**
C 12, 14, 16, 17, 22, 24, 28, 116, 216	**RCUX1E223KB**	C 104, 204	**RCUX1H123KB**	R 14	**ERJ6GCJ220**	R 309	**ERJ6GCJ103**
C 19, 301	**ECEA0GKS330**	C 105, 213	**ECSE1CT105SL**	R 15	**ERD16TJ331**		**CHIP JUMPER**
C 21	**ECUX1E333MB**	C 107, 207	**ECUX1E224ZF**	R 23, 24	**ERD16TJ472**	RJ 1, 2, 3, 4, 5	**ERJ6GCJ000**
C 23	**RCUX1H681KB**	C 109, 209	**ECEA0GKS101**	R 25	**ERD16TJ102**		
C 25, 30, 35, 303, 304, 306, 307	**ECEA0GKS221**	C 110, 210	**ECSE0GT4750L**	R 26	**ERJ6GCJ334**		
C 26, 302	**ECEA1HKS2R2**	C 112, 212, 308, 309, 310	**RCUX1H102KB**	R 28	**ERD25FJ331**		
		C 113, 205	**ECSE1CT105SR**	R 101, 201	**ERJ6GCJ*21**		
		C 114, 214	**RCUX1H562KB**	R 102, 202	**ERJ6GCJ123**		
		C 115, 215	**ECSE1VT2240R**	R 103, 108, 203, 208	**ERJ6GCJ154**		
		C 305	**ECSF1AE475**				
		C 311	**ECBT1H101J**				

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